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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,941	03/05/2002	Syun Kyung Lee	201-0148 FGM	5497

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MACMILLAN, SOBANSKI & TODD, LLC
ONE MARITIME PLAZA - FOURTH FLOOR
720 WATER STREET
TOLEDO, OH 43604

EXAMINER

LUM, LEE S

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/683,941	Applicant(s) LEE ET AL.	
	Examiner Ms. Lee S. Lum	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, "a second preemptive mode" is unclear because it is not described here, nor in subsequent Claims, and because the "first mode" was not previously established as "preemptive".

Claim 2 is unclear because of its dependence from Claim 1 - the "preemptive mode" would not have occurred without "a sensed slip condition", therefore it is unclear how the mode terminates after a time period "without the occurrence of a sensed slip condition".

In Claims 2, 4 and 5, "said preemptive mode" is unclear because it is unknown if this refers to the "first" or "second" mode. Nevertheless, this Office Action takes its meaning as referring to the "first mode".

In Claim 11, "third condition" (emphasis added) is unclear because no other "conditions" were previously specified.

The following elements lack antecedent basis:

In Claim 2 – occurrence,

In Claim 5 – attainment (two occurrences),

In Claim 7 – speed (two occurrences),

In Claim 9 – presence,

In Claims 10 and 11 – occurrence,

In Claim 14 – difference, speed (two occurrences).

Art Unit: 3611

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2A. As best understood, **Claims 1-8** are rejected under 35 U.S.C. 102(b) as being anticipated by Showalter 5704444.

Showalter discloses a four-wheel drive assembly comprising

Torque transfer assembly 10 having first mode of operation which transfers torque (Step 322) to an axle upon a sensed slip condition (i.e., certain difference between front and rear axle speeds – Step 318),

The mode terminating after a period of time without an occurrence of a slip condition (as best understood),

The mode recurring upon a sensed slip condition after the time period* (time period exemplified in col 10, lines 18-21; “[timed program running] every one to five seconds”), and,

The mode terminating upon attainment of a certain vehicular speed* (Step 334), and a certain difference** between first and second axles (Step 306A).

* Precise values of “time period”, “vehicular speed” and “difference between axle speeds” are disclosed in col 12, first entire paragraph.

2B. **Claims 9-12, 14, 16, 18-20** (11 as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Hiwatashi 6094614.

Re **Claims 9-12 and 14** (11, 12, 14 as best understood), Hiwatashi discloses a four-wheel drive assembly comprising

Torque transfer assembly, comprising elements 1-12, and,

Controller 90 sensing the presence of a surface having a low coefficient of friction (Step 101),

And having slip control mode which is performed only after the presence of the surface is sensed, the latter determined by sensing an occurrence of a slip condition (col 5, last paragraph),

The slip control mode terminating upon an occurrence of a certain vehicular speed (col 5, lines 53-54) in combination with a certain wheel speed,

The wheel speed comprising the difference between at least one front, and one rear, wheels (col 5, lines 47-52).

As best understood, re **Claim 16**, the patent discloses the slip control mode as terminating after a certain time period as inherent because the controller 90 runs the algorithms described in Figs 4 and 5 continuously. Therefore, if the slip conditions are nonexistent, the slip control mode is terminated.

Re Claims **18-20**, the patent further discloses a method of operating a vehicle including the steps of sensing slip, the steps depicted in Figs 4 and 5.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiwatashi in view of Showalter.


Hiwatashi does not specify certain thresholds for vehicular speed, wheel speed, and time periods, while Showalter shows these values in col 12, first entire paragraph. While these features are application-specific, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include these parameters, as shown in Showalter, as a suggestion as to the scope of the invention.

Art Unit: 3611

4. The prior art made of record, and not relied upon, is pertinent to the Applicant's disclosure, in addition to the art listed on the IDS filed 3/18/02: Bober et al 6161643, Watson et al 6062330, 5407024, Takasaki et al 5839084, Sasaki 5701247.

5. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, M-F, 9-6. Our fax numbers are (703) 872-9326, 872-9327 for after-final comms, and 308-2571 for comms having given prior notice to the examiner. Any inquiry of a general nature, or relating to the status of this application/proceeding, should be directed to Customer Assistance at (703) 306-5771.


Lesley D. Morris
~~Primary Examiner~~
SPEAU3611

Ms. Lee S. Lum
Examiner
4/1/03

